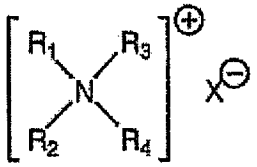
AMENDMENTS TO THE CLAIMS

Listing of claims:

1. (Currently amended) A ternary surfactant blend consisting essentially of:

(a) an antimicrobial compound of the formula:



wherein,

R_1 and R_2 are straight or branched chain lower alkyl groups having from one to seven carbon atoms;

R_3 is a straight or branched chain higher alkyl group having from about eight to twenty carbon atoms, or a benzyl group optionally substituted with C_1-C_6 alkyl groups;

R_4 is a straight or branched chain higher alkyl group having from about eight to twenty carbon atoms; and

X is an anion forming a water soluble salt, consisting essentially of halogen, methosulfate, sulfate, ethosulfate, tosylate, acetate, phosphate, nitrate, sulfonate, or carboxylate;

(b) an anionic surfactant selected from the group consisting of: alkyl sulfates having from about 8 to about 10 carbon atoms, alkyl ether sulfates, and alkyl sulfonates having from about 8 to about 10 carbon atoms; and

(c) a bridging surfactant selected from the group consisting of amine oxide and amphoteric surfactant,

wherein the ternary blend forms a complex that retains the antimicrobial property of compound (a).

2. (Currently amended) An antimicrobial composition comprising water and the ternary surfactant ~~—~~blend according to claim 1, wherein said antimicrobial composition is in an amount effective to control the growth of microorganisms in contact with the composition.

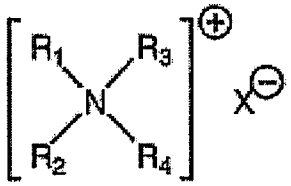
3. (Currently amended) An antimicrobial composition comprising water and an amount of ~~a~~ the ternary blend according to claim 1, effective to produce a concentration of the anti-microbial compound of from about 1 to about 3000 ppm.

4-6 (Canceled).

7. (Withdrawn) A method for controlling the growth of microorganisms, comprising contacting a surface suspected of containing microorganisms with a surfactant blend according to claim 1.

8. (Currently amended) A ternary surfactant blend ~~comprising~~ consisting essentially of:

(a) ~~a~~at least one quaternary ammonium compound of the formula:



wherein

R_1 and R_2 are straight or branched chain lower alkyl groups having from one to seven carbon atoms;

R_3 is a straight or branched chain higher alkyl group having from about eight to twenty carbon atoms, or a benzyl group optionally substituted with C_1-C_6 alkyl groups;

R_4 is a straight or branched chain higher alkyl group having from about eight to twenty carbon atoms; and

X is an anion forming a water soluble salt;

(b) an anionic surfactant ~~consisting essentially~~ which is at least one member selected from the group consisting of:

(i) an alkyl sulfate having an average of from about 8 to about 16 carbon atoms;

(ii) an alkyl sulfonate having an average of from about 8 to about 18 carbon atoms;

(iii) an alkyl ether sulfate having an average of from about 8 to about 16 carbon atoms in the alkyl portion and from about 1 to about 30 moles of ethylene oxide;

(iv) an α – olefin sulfonate having an average of from about 12 to about 18 carbon atoms;

(v) an α – sulfonated C_1 – C_6 alkyl ester of a fatty acid having an average of from about 11 to about 16 carbon atoms;

(vi) a sulfosuccinate having an average of from about 10 to about 16 carbon atoms;

(vii) a sarcosinate having an average of from about 10 to about 16 carbon atoms;

(viii) a sulfoacetate having an average of from about 12 to about 20 carbon atoms; ~~or~~ and mixtures thereof; and

(c) a bridging surfactant selected from the group consisting of amine oxides, ethoxamides, and betaines~~.~~.

wherein the total concentration of combined quaternary ammonium compound, anionic, and bridging surfactants is from about 30 to about 80 percent by weight, and wherein the surfactant blend ~~is~~ forms a complex that is clear and flowable.

9. (Canceled)

10. (Currently amended) A ternary surfactant blend according to claim 8, wherein the anionic surfactant is an alkyl sulfate having an average of from about 10 to about 12 carbon atoms.

11. (Currently amended) A ternary surfactant blend according to claim 8, wherein the anionic surfactant is an α – sulfonated $C_1 - C_6$ alkyl ester of a fatty acid having an average of from about 11 to about 16 carbon atoms.

12. (Currently amended) A ternary surfactant blend according to claims 8, wherein the anionic surfactant is an alkyl sulfonated having an average of about 6 carbon atoms.

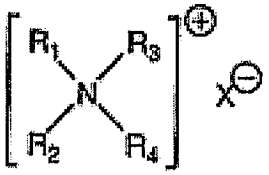
13. (Currently amended) A ternary surfactant blend according to claim 8, wherein the anionic surfactant is an alkyl ether sulfate having an average of from about 8 to about 16 carbon atoms in the alkyl portion and from about 1 to about 30 moles of ethylene oxide.

14-23. (Canceled)

24. (Currently amended) An aqueous liquid phase comprising the surfactant blend of claim ~~23~~8, wherein the ~~cationic surfactant~~quaternary ammonium compound, anionic surfactant, and bridging surfactant are each present in an amount of from about 5 to about 35 percent by weight.

25. (Withdrawn) A method for preparing an antimicrobial composition comprising combining:

(a) a quaternary ammonium compound of the formula:



wherein,

R_1 and R_2 are straight or branched chain lower alkyl groups having from one to seven carbon atoms;

R_3 is a straight or branched chain higher alkyl group having from about eight to twenty carbon atoms, or a benzyl group optionally substituted with C_1-C_6 alkyl;

R_4 is a straight or branched chain higher alkyl group having from about eight to twenty carbon atoms; and

X is an anion forming a water soluble salt,

(b) an anionic surfactant which is at least one member selected from the group consisting of:

(i) an alkyl sulfate having an average of from about 8 to abut 16 carbon atoms;

(ii) an alkyl sulfonate having an average of from about 8 to about 18 carbon atoms;

(iii) an alkyl ether sulfate having an average of from about 8 to about 16 carbon atoms in the alkyl portion and from about 1 to about 30 moles of ethylene oxide;

(iv) an α – olefin sulfonate having an average of from about 12 to about 18 carbon atoms;

(v) an α – sulfonated $C_1 – C_6$ alkyl ester of a fatty acid having an average of from about 11 to about 16 carbon atoms;

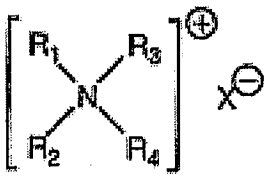
(vi) a sulfosuccinate having an average of from about 10 to about 16 carbon atoms;

(vii) a sarcosinate having an average of from about 10 to about 16 carbon atoms;

(viii) a sulfoacetate having an average of from about 12 to about 20 carbon atoms;

(c) a bridging surfactant selected from the group consisting of amine oxides, ethoxamides, and betaines; and optionally

(d) a cationic surfactant which is quaternary ammonium compound of the formula:



wherein,

R_1, R_2 and R_3 are independently ethyl or methyl groups;

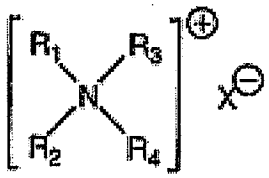
R_4 is an alkyl group having an average of from about 8 to about 16 carbon atoms; and

X is a member selected from the group consisting of halogen, sulfate, methosulfate, ethosulfate, tosylate, acetate, phosphate, nitrate, sulfonate, and carboxylate; and

wherein the total concentration of combined quaternary ammonium compound, anionic, and bridging surfactants is from about 30 to about 80 percent by weight, and wherein the surfactant blend is flowable.

26. (Currently amended) An antimicrobial composition comprising water and a ternary surfactant blend consisting essentially of:

(a) Aa quaternary ammonium compound of the formula:



wherein,

R_1 and R_2 are straight or branched chain lower alkyl groups having from one to seven carbon atoms;

R_3 is a straight or branched chain higher alkyl group having from about eight to twenty carbon atoms, or a benzyl group optionally substituted with C_1-C_6 alkyl groups;

R_4 is a straight or branched chain higher alkyl group having from about eight to twenty carbon atoms; and

X is an anion forming a water soluble salt;

(b) an anionic surfactant which is a member selected from the group consisting of:

(i) an alkyl sulfate having an average of from about 8 to about 16 carbon atoms;

(ii) an alkyl sulfonate having an average of from about 8 to about 18 carbon atoms;

(iii) an alkyl ether sulfate having an average of from about 8 to about 16 carbon atoms in the alkyl portion and from about 1 to about 30 moles of ethylene oxide;

(iv) an α – olefin sulfonate having an average of from about 12 to about 18 carbon atoms;

(v) an α – sulfonated $C_1 – C_6$ alkyl ester of a fatty acid having an average of from about 11 to about 16 carbon atoms;

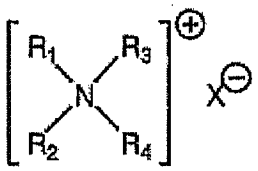
(vi) a sulfosuccinate having an average of from about 10 to about 16 carbon atoms;

(vii) a sarcosinate having an average of from about 10 to about 16 carbon atoms;

(viii) a sulfoacetate having an average of from about 12 to about 20 carbon atoms; and mixtures thereof; and

(c) a bridging surfactant selected from the group consisting of amine oxides, ethoxamides, and betaines; and optionally

(d) a cationic surfactant which is a quaternary ammonium compound of the formula:



wherein,

R_1, R_2, and R_3 are independently ethyl or methyl groups;

R_4 is an alkyl group having an average of from about 8 to about 16 carbon atoms; and

X is a member selected from the group consisting of halogen, sulfate, methosulfate, ethosulfate, tosylate, acetate, phosphate, nitrate, sulfonate, and carboxylate; and

wherein the total concentration of combined quaternary ammonium compound,

anionic, and bridging surfactants is from about 0.1 to about 30 percent by weight, and wherein the surfactant blend ~~is~~ forms a complex that is clear and flowable.

27. (Withdrawn) A composition according to claim 25, wherein the anionic surfactant is an alkyl sulfate having an average of from about 10 to about 12 carbon atoms.

28. (Withdrawn) A composition according to claim 25, wherein the anionic surfactant is an α – sulfonated $C_1 – C_6$ alkyl ester of a fatty acid having an average of from about 11 to about 16 carbon atoms.

29. (Withdrawn) A composition according to claim 25, wherein the anionic surfactant is an alkyl sulfonate having an average of about 8 carbon atoms.

30. (Withdrawn) A composition according to claim 28, wherein the anionic surfactant is an alkyl ether sulfate having an average of from about 8 to about 16 carbon atoms in the alkyl portion and from about 1 to about 30 moles of ethylene oxide.

31. (Withdrawn) An aqueous composition comprising water and the composition of claim 25, where the concentration of the quaternary ammonium compound in the composition is from about 1-3000 ppm.

32. (Withdrawn) An antimicrobial composition according to claim 25, wherein the amount of blend of claim 1 is effective to produce a concentration of the anti-microbial compound of from about 1 to about 10 ppm.

33. (New) A surfactant blend according to claim 8, wherein components (a), (b) and (c) are present in the ternary blend in a molar ratio of 1:1:1.